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VOL. 7 No. 50 DECEMBER 13, 1957

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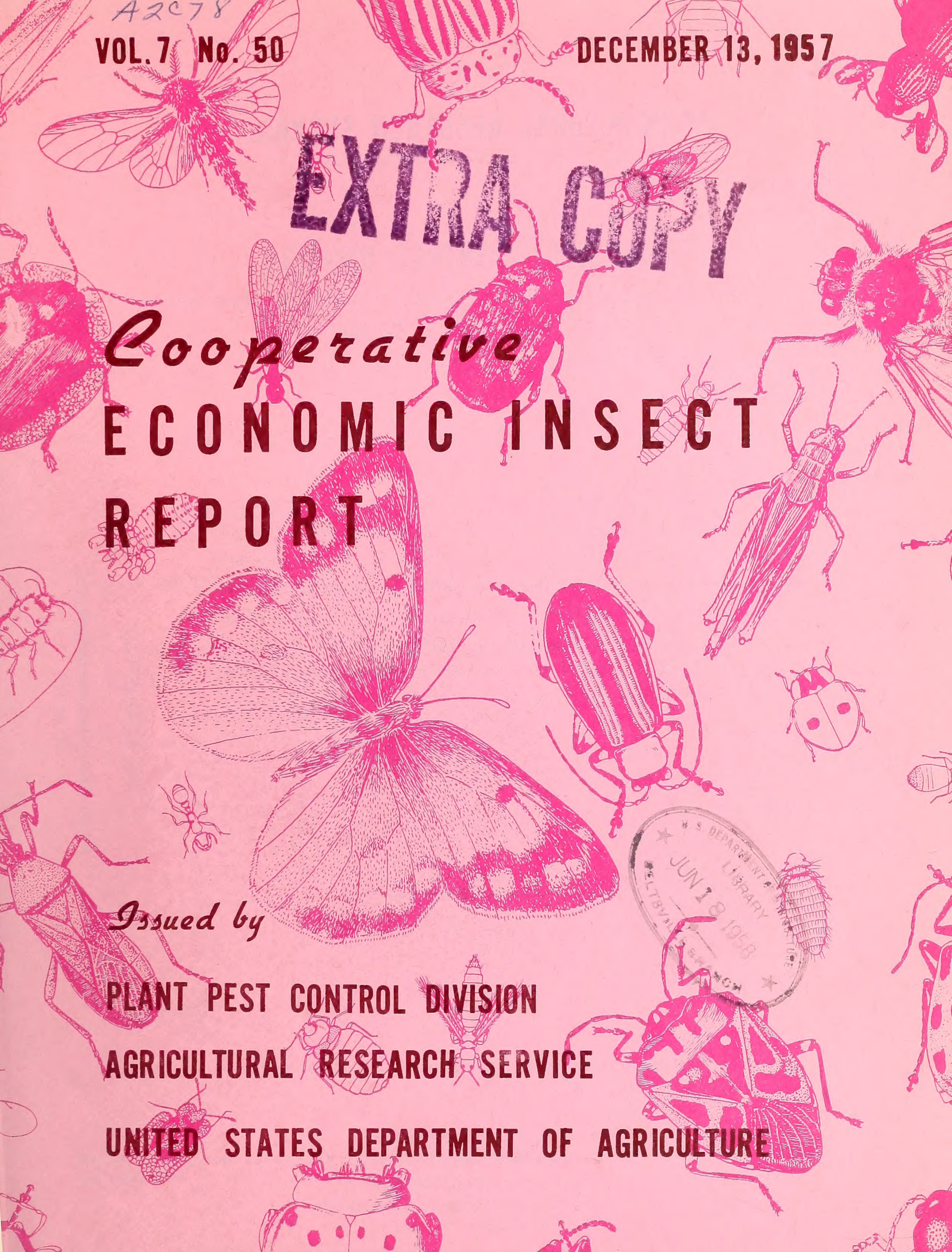

Cooperative ECONOMIC INSECT REPORT

U. S. DEPARTMENT OF AGRICULTURE
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PLANT PEST CONTROL DIVISION
AGRICULTURAL RESEARCH SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

Volume 7 December 13, 1957 Number 50

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

MEDITERRANEAN FRUIT FLY adults trapped in Manatee County, Florida. (p. 921).

Additional information on PEPPER WEEVIL in southern New Jersey. (p. 922).

SMALLER EUROPEAN ELM BARK BEETLE found at Logan, Cache County, Utah. (p. 922).

Spread of PINK BOLLWORM in the United States (map). (p. 924).

INSECTS not known to occur in the United States. (p. 925).

GRASSHOPPER adult survey - fall 1957. (following p. 926).

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Reports in this issue are for the week ending December 6 unless otherwise designated.

WEATHER OF THE WEEK DECEMBER 9

With Pacific air masses moving eastward across the United States and numerous low pressure systems developing east of the Rocky Mountains, the week's weather, generally was unseasonably mild with much cloudiness and heavy precipitation east of the Mississippi. A heavy snowstorm featured the weather in the East. This storm, moving eastward from Missouri across Chesapeake Bay on the 3d and 4th, left 1 to 3 inches of snow in central Illinois, several inches in central Indiana, 6 to 8 inches in central Ohio, and up to a foot or more locally along the east coast from northern Virginia to northern New Jersey. In Washington, D. C., 11.1 inches were measured. The heavy snow caused great traffic congestion, but it was all melted by warmer weather and rain on the 7th and 8th. Precipitation occurred on 3 to 5 days in most of the East and weekly totals exceeded an inch from the Ohio and lower Mississippi Valleys eastward. Water supplies were improved in New Jersey and adjacent areas of surrounding states, but more precipitation is still needed as reservoirs in that State remained low and some farmers in Pennsylvania are still hauling water. In southern areas, except Florida, wet soils continued to hamper the harvest of late crops. West of the Mississippi, precipitation was generally very light, except along portions of the Pacific coast. Dry, mild weather in the Great Plains was very favorable for late harvesting operations. Strong winds, however, blew the topsoil in eastern Colorado on the 2d. Chinook winds up to 80 m.p.h., were reported in western South Dakota on the 7th. Temperatures for the week averaged 6° to as much as 12° above normal in the northwestern Great Plains and a few degrees above in other northern areas, tapering off to normal or below in southern areas. Weekly averages ranged from 3° to 6° below normal in Florida where freezing occurred in the central Peninsula on the 2d and in northern areas again on the 5th and 6th. The freeze caused only slight damage. Subzero minima during the week were limited to higher elevations in the Rocky and northern Appalachian Mountains, and a few stations in the Great Lakes region. In Wisconsin bare ground in the south is frozen a few inches deep and small lakes and shallow streams in the State are frozen over. In the Mississippi River navigation ended at LaCrosse, Wis., on the 2nd, and at Guttenberg, Iowa, on the 3d. Also on the 3d the last ore boat left Duluth, Minn. Snow cover at the end of the period was limited to the western Mountains, from eastern North Dakota through the upper Great Lakes region, and in northern sections of New York State and New England. In the northern Cascades depths measured 2 feet or more above elevations of 4,000 feet.

(Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

CHINCH BUG (Blissus leucopterus) - OKLAHOMA - Twenty-five northeastern counties have been sampled to December 7 in annual Federal-State chinch bug survey. An increase of 29 percent (county averages) was noted in number of bugs hibernating compared with last year. Okfuskee County had the highest county average, 9,775 bugs per square foot while Sequoyah County had the lowest, 71 per square foot. Seventy-two percent of the counties surveyed this year had infestation ratings of severe-very severe compared with 53 percent in the fall of 1956. (Fed.-State Chinch Bug Survey)

GREENBUG (Toxoptera graminum) - OKLAHOMA - Light populations, 3-5 per linear foot of row, were noted in Ottawa County. Numbers were restricted largely to oats, both volunteer and planted. An occasional greenbug was found on oats in Mayes County. (Coppock, Robinson). FLORIDA - Nymphs and adults heavily infesting 3 acres of oats at Marianna, Jackson County. (Crowell, Oct. 26).

ENGLISH GRAIN APHID (Macrosiphum granarium) - OKLAHOMA - Numbers ran from 0 to 3 per linear foot of row in oats and wheat in Mayes and Ottawa Counties. (Coppock, Robinson).

RHODES-GRASS SCALE (Antonina graminis) - CALIFORNIA - Survey in Imperial County in towns of Brawley and Calipatria was conducted. All St. Augustine grass lawns readily located were surveyed for infestation. No scale reported from either city. (Cal. Coop. Rept.).

A SCALE INSECT (Antonina nortoni) - OKLAHOMA - Adults taken from purple threeawn (Aristida purpurea) in Texas County, November 14. Found on roots and crown of plant. (Apt).

APHIDS - OKLAHOMA - Rhopalosiphum fitchiii and R. maidis were found occasionally on few fields of oats and wheat in Mayes and Ottawa Counties. Penthaleus major was occasionally noted in oats in Mayes and Craig Counties. (Coppock, Robinson).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - OKLAHOMA - Infestation 10 percent in 2 fields in Ottawa County. (Coppock, Robinson).

FRUIT INSECTS

Citrus Insect Situation, Lake Alfred, Florida - Activity of PURPLE SCALE unchanged this week with little change expected in next week or two. The average infestation will be above normal in December. There was a reduction of activity of FLORIDA RED SCALE this week, and the general trend in December will be down. CITRUS RED MITE activity continued to increase this week and further increase is expected. CITRUS RUST MITE activity was unchanged this week and a declining trend will begin in a week or two, but the level will remain high through December. TEXAS CITRUS MITE infestations are still increasing. (Pratt, Thompson, Johnson; November 26).

MEDITERRANEAN FRUIT FLY (Ceratitis capitata) - FLORIDA - Two males trapped on Sneads Island, Manatee County, November 26. (Bittner).

UNSPOTTED TENTIFORM LEAF MINER (Callisto geminatella) - NEW JERSEY - A survey was conducted from October 14 to 18 in 58 apple plantings in 11 counties of which 37 were infested. The heaviest infestations were found in southern area, but orchards in Monmouth, Warren and Morris Counties showed from 13.7 to 33 percent of the leaves mined. The highest percentage of infested leaves in each county was as follows: Cumberland-55.7, Atlantic-84, Gloucester-59.7, Camden-87.3, Burlington-79.7, Monmouth-33, Mercer-83, Middlesex-10, Warren-20.7, Morris-13.7, Bergen-0. It is impossible to forecast at present what the future of this insect will be in 1958, however, a potential for a heavy outbreak exists in many orchards. (N.J. Coop. Econ. Ins. Rept.).

TRUCK CROP INSECTS

PEPPER WEEVIL (Anthonomus eugenii) - NEW JERSEY - Pepper weevil was discovered in Gloucester County in September, 1957, and identification was confirmed by R. E. Warner. It is now present in the general area around Vineland in Atlantic, Gloucester and Cumberland Counties. Since pepper weevil is capable of multiplying very rapidly, the infestation may well be of one season's duration only. Plants from seeds supplied by local farmers are grown in the infested southern area and brought to New Jersey for setting in the fields. Since pepper weevil is a serious pest of peppers, the area should be watched closely to ascertain if the weevil could possibly appear again early in the 1958 season. The possibility of weevils overwintering in greenhouses in the Vineland area should be followed up closely. (N. J. Coop. Eco. Ins. Surv.).

LYGUS BUGS - UTAH - Large numbers moved from second crop alfalfa, after cutting, to potato crop in Milford area, Beaver County; 500 acres were sprayed for control. (Knowlton).

COTTON INSECTS

PINK BOLLWORM (Pectinophora gossypiella) - OKLAHOMA - Inspections were conducted on 12 lint cleaners and 21 gin stands in 13 southern cotton producing counties. Total of 84 pink bollworm larvae were recovered in Greer, Tillman, Jefferson, Kiowa and McClain Counties. The remaining 8 counties were negative. (Fed.-State PBW Comm.). CALIFORNIA - Boll and gin trash inspections completed in Imperial County. A total of 16,750 green bolls and 3,320 bushels of trash were inspected. No pink bollworm were found. (Cal. Coop. Rept.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - UTAH - Found in dead Siberian elm at Logan, Cache County, October 17, 1957. Det. S. L. Wood. (Heninger).

OLIVE SCALE (Parlatoria oleae) - MARYLAND - Very heavy on privet at Baltimore. (U. Md., Ent. Dept.).

PINE NEEDLE SCALE (Phenacaspis pinifoliae) - MARYLAND - Infesting hemlock at Annapolis. (U. Md., Ent. Dept.).

SPRUCE SPIDER MITE (Oligonychus ununguis) - MARYLAND - Heavy damage noted to spruce and hemlock at Annapolis. (U. Md., Ent. Dept.).

WHITE PEACH SCALE (Pseudaulacaspis pentagona) - MARYLAND - Heavy on lilac in a nursery at Dundalk. (U. Md., Ent. Dept.).

STORED PRODUCTS INSECTS

A DERMESTID (Perimegatoma vespulae) - CALIFORNIA - Light on single property in Santa Paula, Ventura County. This is second California record, the first being found in wheat grass seed in Alameda County, April 1955. (Cal. Coop. Rept.).

A FLOUR BEETLE (Tribolium destructor) - CALIFORNIA - Collected in debris and grain in Santa Barbara County. (Cal. Coop. Rept.).

KHAPRA BEETLE INSPECTION - CALIFORNIA - A new infestation of khapra beetle (Trogoderma granarium) reported from Granite Station, Kern County, on sacks of mixed feed. Infestation medium. This was the 316th recorded infestation in the State since the beginning of the program. (Cal. Coop. Rept.).

OREGON - Thirteen establishments inspected in Morrow, Sherman and Gilliam Counties; no khapra beetle found. Light infestations of red flour beetle, cadelle and granary weevils discovered in several localities. (Chinn, Nov. 30).

MISCELLANEOUS INSECTS

LARGER YELLOW ANT (*Lasius interjectus*) - MARYLAND - Causing a nuisance around homes in Caroline and St. Marys Counties. (U. Md., Ent. Dept.).

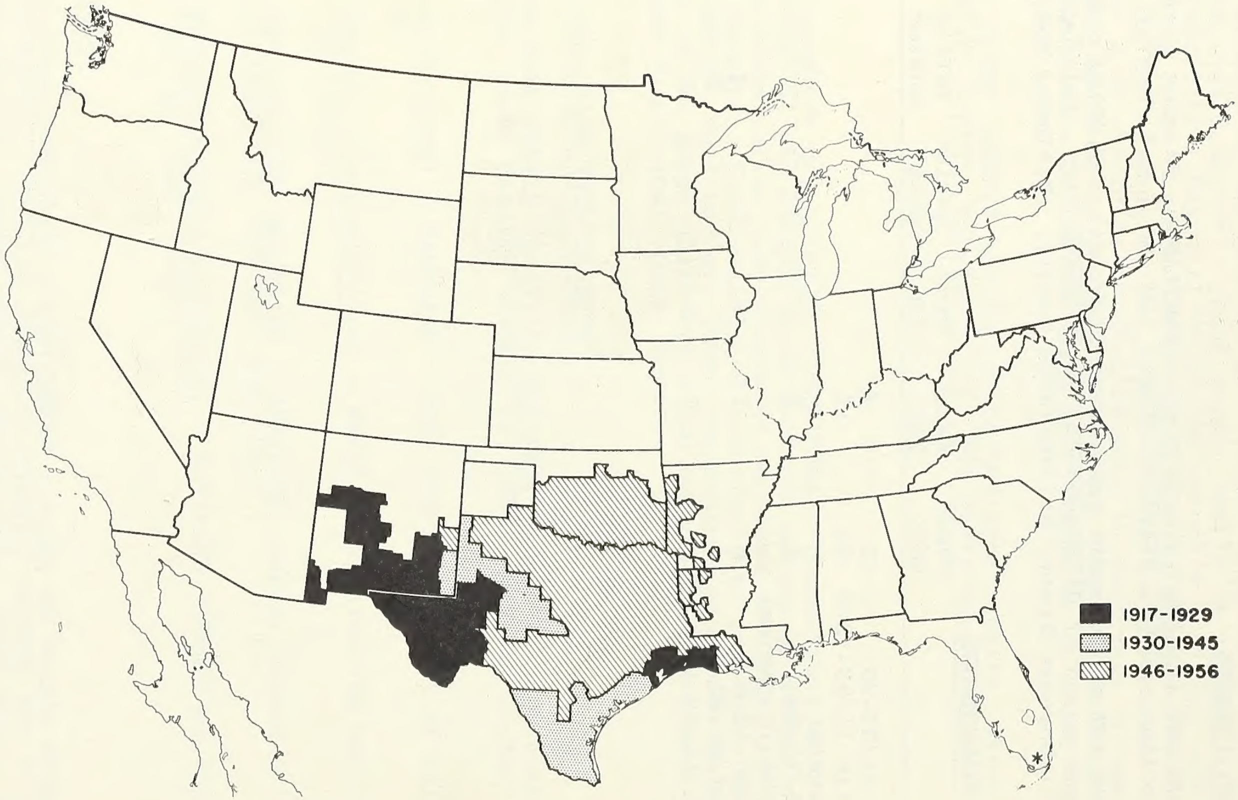
IMPORTED FIRE ANT (*Solenopsis saevissima richteri*) - FLORIDA - Extension of new positive finds north of Hillsborough, River State Park, and found for first time south of Hillsborough River, Hillsborough County. (Bittner, Nov. 29).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Prod. orn.	Perid. marg.	Feltia subter.	Heliothis zea
ARKANSAS						
Stuttgart 11/21-26	2	4				
Fayetteville 11/23-12/6	95	14				
NEBRASKA (County)						
Lincoln 11/15-24	2	7		2		
SOUTH CAROLINA (Counties)						
Oconee 11/30-12/6	5	1	1	3	4	
Florence 11/30-12/6					2	
Charleston 11/25-12/8	1	7	2		10	2

SPREAD OF PINK BOLLWORM

1917 - 1956



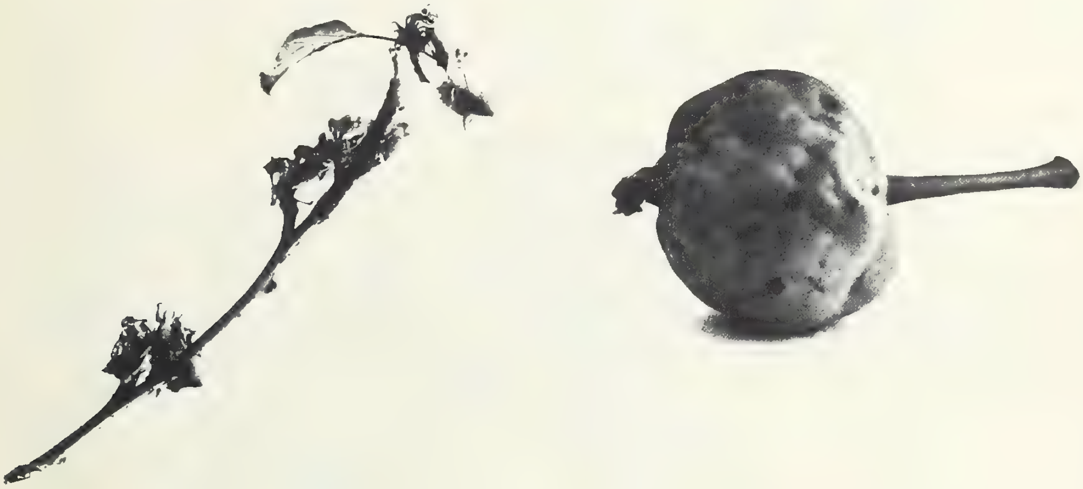
* Occurs in Wild Cotton

Prepared in ARS, USDA, 1957

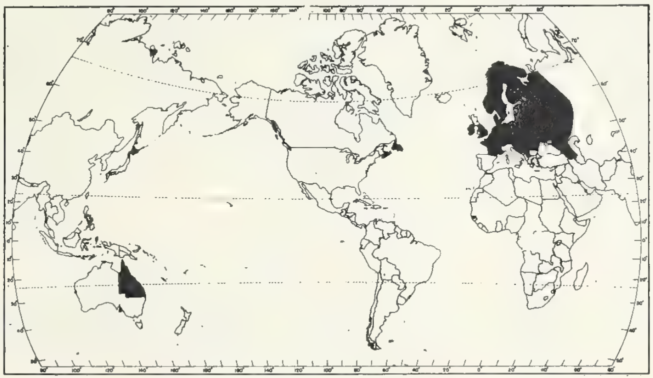
INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

APPLE SUCKER (*Psylla mali* Schmidberger)

Economic Importance: Apple sucker is a serious pest of apple in many European countries and has caused considerable concern in orchards in the provinces of Nova Scotia and New Brunswick, Canada, in some years. It is considered one of the most serious pests of apple in Norway. A study conducted in the lower Elbe region of Germany in 1925 showed *P. mali* to be the most important factor in decreased apple yields in that area. Populations were so abundant in the Havel River fruit district of that country in 1920 that most of the apples failed to ripen. England has recorded as much as 70 percent damage to the apple crop in some areas. Among other countries reporting severe damage are Sweden, Denmark, Switzerland and Russia. Following discovery of the psyllid in Nova Scotia in 1919, damaging infestations were reported during the next decade in that area; however, in recent years most infestations have been light to medium although a few severe infestations occurred in 1955. Infestations cause shriveling of blossoms and yellowing and dropping of foliage. They are of greatest importance when blossoming and fruit-set are light to moderate.



Apple Sucker Damage to Apple Twig and Fruit



General Distribution of *Psylla mali*

Psyllidae, Hemiptera

No. 34 of Series

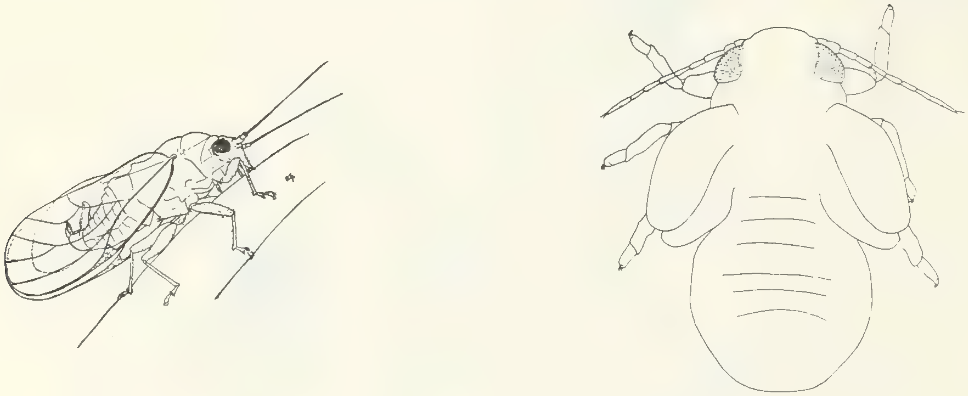
Distribution: Canada (New Brunswick, Nova Scotia), Australia, Austria, Czechoslovakia, Denmark, England, Germany, Holland, Ireland, Japan, Norway, Poland, USSR, Sweden, Switzerland, Finland, France, Belgium, Yugoslavia, Rumania, Hungary, Poland.

Hosts: Apple preferred. Pear, plum, quince sometimes attacked.

Life History and Habits: In Nova Scotia, Canada, nymphs hatch when apple buds are about half open and enter terminals where they feed at the base of leaves and flower stalks. As nymphs approach maturity they move out and feed on fruit stems, leaf petioles and blades. Nymphal stages last from four to five weeks. Adults remain on the trees until late in the fall. They feed slightly but cause no apparent damage. Egg laying begins in September on the current season's growth, chiefly on fruit spurs. As many as 85 eggs have been observed around a single bud. On warm days adults jump rapidly and take to flight when disturbed. The nymphs excrete large quantities of honeydew and the presence of this substance is an identifying characteristic of the insect's presence in an orchard.

Eggs On Twig

Description: Adult, in summer, pale green tinged with yellow. Eyes pale green, dark reddish brown at center. Ocelli bright orange-yellow. Antennae green at base, remainder yellowish brown to black on last two segments. Beak black at tip. Wings transparent, iridescent, veins of forewings yellowish. Tibial and tarsal spurs and claws jet black; legs lighter. Posterior margin of each abdominal segment except the last, orange-yellow. As the season progress, coloration changes, especially in the female. Generally the light colored membranes become more brilliant and dark chitinized portions more intense. Total length of body to tip of folded wing - 3.7 to 4.0 mm. Fifth-instar nymphs pale yellowish green, tip of abdomen orange to brown. Wing pads pale, dirty yellow. Eyes whitish with dark centers. Antennae dusky black at tip. Length 1.7-2.1 mm. Egg cylindrical, elongate, broadly rounded at apex. A short spine-like process projects from ventral surface, attaching egg to twig. Color whitish when first laid, becoming yellow and later reddish orange.



Psylla mali Adult and Fifth-instar Nymph

Figures (except map) from Speyer, W. 1929. Der Apfelblattsauger Psylla mali Schmidberger. 127 pp., Berlin.

UNITED STATES DEPART
AGRICULTURAL RE
PLANT PEST CON

TO COOPERATORS:

This map is based upon the results of cooperati summer and fall of 1957. The survey reveals whe indicate the potential severity of infestations provide the final index of grasshopper populati season.

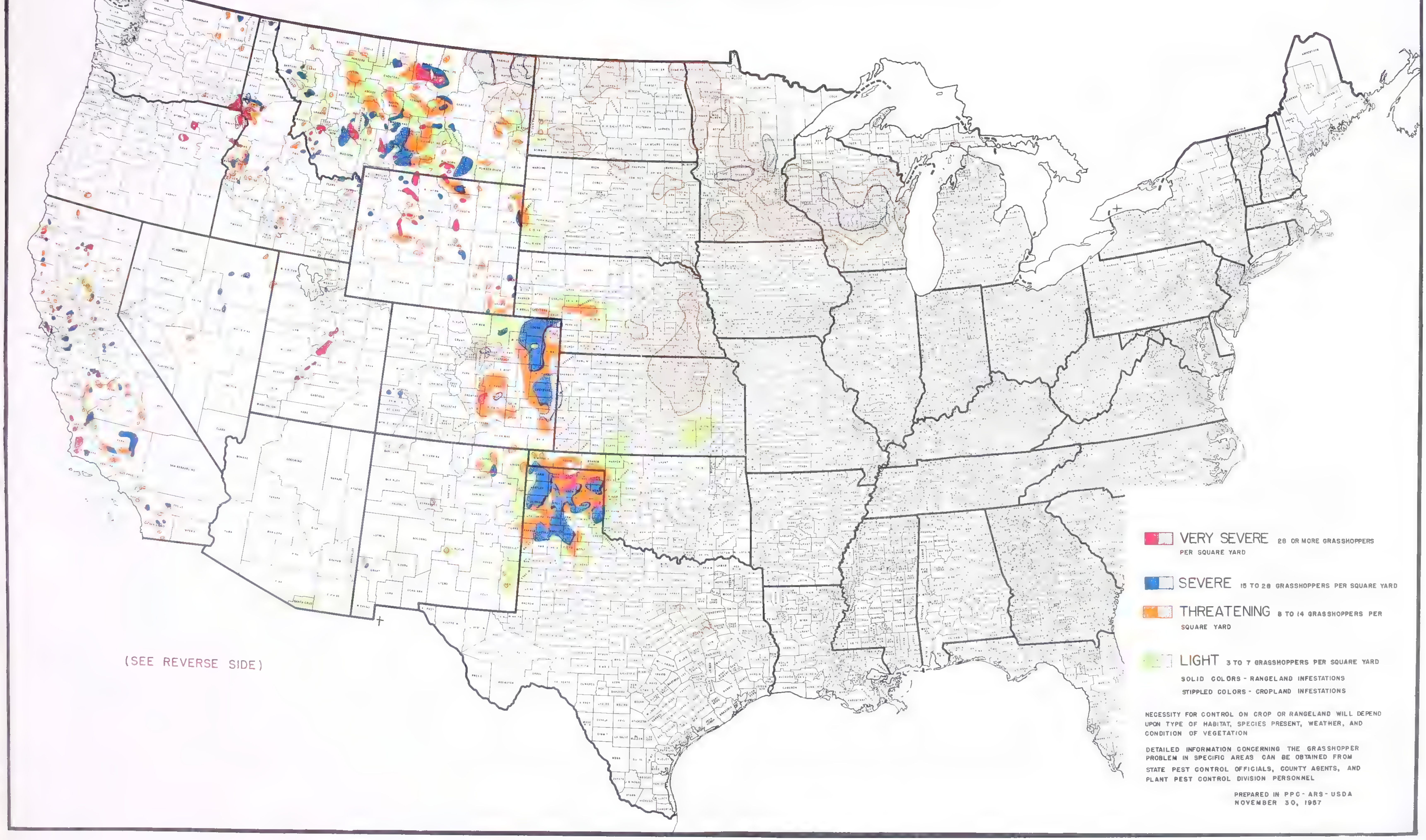
The infestation on croplands, shown on the map which was indicated for 1957. Control on those assistance from Division and State personnel. T colors, total 18,686,492 acres in 17 Western an

RANGELAND GRASSHOPPER INFESTATION

REGION AND STATE	LANDOWNERSHIP - ACRES		Total Acres
	Private & State	Public Domain	
CENTRAL:			
Kansas	218,800	-	218,800
Nebraska	355,000	-	355,000
North Dakota	1,000	17,560	18,560
South Dakota	12,800	15,700	28,500
WESTERN:			
Arizona	0	0	0
California	3,030,980	5,000	3,035,980
Colorado	1,389,000	40,000	1,429,000
Idaho	203,280	246,720	450,000

The survey was planned and performed by the Pla Service in cooperation with various state agenc

GRASSHOPPER ADULT SURVEY - FALL 1957



(SEE REVERSE SIDE)

🟥 VERY SEVERE 28 OR MORE GRASSHOPPERS PER SQUARE YARD

🟦 SEVERE 15 TO 28 GRASSHOPPERS PER SQUARE YARD

🟧 THREATENING 8 TO 14 GRASSHOPPERS PER SQUARE YARD

🟩 LIGHT 3 TO 7 GRASSHOPPERS PER SQUARE YARD

SOLID COLORS - RANGELAND INFESTATIONS
STIPPLED COLORS - CROPLAND INFESTATIONS

NECESSITY FOR CONTROL ON CROP OR RANGELAND WILL DEPEND UPON TYPE OF HABITAT, SPECIES PRESENT, WEATHER, AND CONDITION OF VEGETATION

DETAILED INFORMATION CONCERNING THE GRASSHOPPER PROBLEM IN SPECIFIC AREAS CAN BE OBTAINED FROM STATE PEST CONTROL OFFICIALS, COUNTY AGENTS, AND PLANT PEST CONTROL DIVISION PERSONNEL

PREPARED IN PPC - ARS - USDA
NOVEMBER 30, 1957

GPO 850458

MENT OF AGRICULTURE
SEARCH SERVICE
TROL DIVISION

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S - ACREAGE BY REGIONS - FALL 1957

REGION AND STATE	LANDOWNERSHIP - ACRES Private & State	LANDOWNERSHIP - ACRES Public Domain	Total Acres
Montana	3,020,000	1,891,000	4,911,000
Nevada	18,800	63,700	82,500
New Mexico	431,300	41,000	472,300
Oregon	364,147	29,505	393,652
Utah	-	60,000	60,000
Washington	250,280	75,720	326,000
Wyoming	582,200	61,000	643,200
SOUTHERN:			
Oklahoma	240,000	50,000	290,000
Texas	5,972,000	-	5,972,000

nt Pest Control Division, Agricultural Research
ies concerned.

November 30, 1957

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
PLANT PEST CONTROL DIVISION

TO COOPERATORS:

This map is based upon the results of cooperative grasshopper adult surveys made during the late summer and fall of 1957. The survey reveals where and how many grasshoppers infest an area, and indicate the potential severity of infestations for 1958. Nymphal surveys, made each spring, provide the final index of grasshopper populations which will warrant control that growing season.

The infestation on croplands, shown on the map in stippling, in general is lighter than that which was indicated for 1957. Control on those lands will be handled by the farmers with technical assistance from Division and State personnel. The infested range areas, shown on the map in solid colors, total 18,686,492 acres in 17 Western and Midwestern States.

RANGELAND GRASSHOPPER INFESTATIONS - ACREAGE BY REGIONS - FALL 1957

REGION AND STATE	LANDOWNERSHIP - ACRES		Total Acres
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The survey was planned and performed by the Plant Pest Control Division, Agricultural Research Service in cooperation with various state agencies concerned.

November 30, 1957

M P JONES
AGRL RESEARCH SERVICE USDA
PLANT PEST CONTROL BR
6-29-54
PPS